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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,245	05/25/2007	Martin Buchner	10191/4728	8263
26646	7590	10/03/2007		
KENYON & KENYON LLP ONE BROADWAY NEW YORK, NY 10004			EXAMINER GIMIE, MAHMOUD	
			ART UNIT 3747	PAPER NUMBER
			NOTIFICATION DATE 10/03/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto@kenyon.com

Office Action Summary

Application No.

10/583,245

Applicant(s)

BUEHNER, MARTIN

Examiner

Mahmoud Gimie

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 19 is objected to because of the following informalities: line1, "s" should be ~~is~~ and line 2, "reformable" should be ~~deformable~~.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 17,18,20,23-25,28,31 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Maier et al. (US 6,186,123 B1).

Maier et al. (hereinafter Maier) disclose s fuel injector, comprising: a valve-seat surface; an actuator that cooperates with the valve-seat surface to form a sealing seat; a valve-closure member able to be actuated by the actuator; a structure including a spray-discharge orifice; and a seal (6) for sealing the fuel injector (1) from a valve mount opening (2) of a cylinder head (4), wherein: the seal radially surrounds a region of a discharge-side end of the fuel injector, at least a first section (6) of the seal rests against the valve mount opening (2) in a sealing manner, and via at least an axial partial section (figure 6) that extends only across a portion of the axial length of the seal, the seal is fitted in the region of the discharge-side end of the fuel injector in integral

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fashion, by at least one of a form-fit and a force- locking, see figure 6, col. 4 and ll. 23-61.

Regarding claim 18, wherein the seal (6) is fitted by at least one of: one of welding and laser welding, and one of tamping and pressing (col. 4 and ll. 48-61).

Regarding claim 19, wherein the seal s made of metal including at least one of deformable steel, V2A steel, a copper alloy, and a brass alloy.

Regarding claim 20, wherein at least a portion of the seal has the form of a sleeve.

Regarding claim 23, wherein the first section projects at least partially toward an outside compared to adjoining parts of the seal, see figure 6.

Regarding claim 24, wherein the first section is wave-shaped in cross-sectional profile and sealingly rests against the valve mount opening at a plurality of points.

Regarding claim 25, wherein the first section at least one of: is formed as a partial circle in cross-sectional profile, and widens a diameter of the seal toward an outside in the form of a partial circle.

Regarding claim 28, wherein: the seal extends between a discharge-side region of the fuel injector and the valve mount opening, axially up to a transition region where the valve mount opening goes over into a combustion chamber.

Regarding claim 31, wherein the seal is at least partially coated (col. 2 and ll. 44-45).

Regarding claim 32, wherein the seal is beveled on an outside at least at one of its ends.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 21,22,26,27,29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maier et al. (US 6,186,123 B1).

Maier discloses all the limitations as applied to claims 17,18,20,23-25,28,31 and 32 above, except for various optional methods of production.

At the time the invention was made; it would have been an obvious matter of design choice to a person of ordinary skill in the art to manufacture the seal by various production methods because applicant has not disclosed that doing so provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, further, would have expected applicant's invention to perform equally well with the metal ring disclosed by Maier because it limits the risk of overheating the fuel injection nozzle.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited references show fuel injectors.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mahmoud Gimie whose telephone number is 571-272-


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4841. The examiner can normally be reached on Monday-Friday between 7 a.m. -3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen K. Cronin can be reached on 571-272-4536. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MG


MAHMOUD GIMIE
PRIMARY EXAMINER